

1. A method of forming a metal-domprising mass for a semiconductor construction, comprising:

providing a semiconductor substrate;

providing one or more metallo-organic precursors proximate the substrate, at least one of the one or more precursors not comprising platinum;

exposing the one or more precursors to a reducing atmosphere to release metal from the one or more precursors; and

depositing the released metal over the semiconductor substrate to form a metal-comprising mass on the semiconductor substrate.

- 2. The method of claim 1 wherein the substrate comprises an upper surface consisting of one or more of TiN, elemental Ti, WN, elemental W, TaN and elemental Ta; and wherein the upper surface is exposed to the reducing atmosphere during formation of the metal-comprising mass.
- 3. The method of claim 1 wherein the substrate comprises an oxidizable upper surface; and wherein the metal-comprising mass is formed physically against the upper surface; the oxidizable upper surface being exposed to the reducing atmosphere during the release of at least some of the metal.



- 4. The method of claim 1 wherein the substrate comprises an upper surface consisting of one or more of TiN, elemental Ti, WN, elemental W, TaN and elemental Ta; and wherein the metal-comprising mass is formed physically against the upper surface.
- 5. The method of claim 1 wherein the one or more precursors comprise ruthenium, and wherein the released metal consists essentially of ruthenium.
- 6. The method of claim 1 wherein the one or more precursors comprise rhodium, and wherein the released metal consists essentially of rhodium.
- 7. The method of claim 1 wherein the one or more precursors comprise iridium, and wherein the released metal consists essentially of iridium.
- 8. The method of claim 1 wherein the one or more precursors comprise cobalt, and wherein the released metal consists essentially of cobalt.
- 9. The method of claim 1 wherein the one or more precursors comprise palladium, and wherein the released metal consists essentially of palladium.

11. The method of claim 1 wherein the one or more precursors comprise tricarbonyl-cyclohexadiene ruthenium.

12. The method of claim 1 wherein the reducing atmosphere comprises NH<sub>3</sub>.

13. The method of claim 1 wherein the reducing atmosphere comprises activated hydrogen.

14. The method of claim 1 wherein the reducing atmosphere comprises H<sub>2</sub>.

15. A method of forming a metal-comprising mass for a semiconductor construction, comprising:

providing a semiconductor substrate;

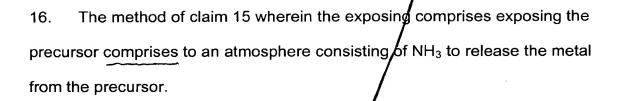
providing a metal-comprising precursor proximate the substrate;

exposing the metal-comprising precursor to NH<sub>3</sub> to release metal

from the precursor; and

depositing the released metal over the semiconductor substrate to form the metal-comprising mass.

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- 17. The method of claim 15 wherein the precursor comprises ruthenium, and wherein the released metal consists essentially of ruthenium.
- 18. The method of claim 15 wherein the precursor comprises rhodium, and wherein the released metal consists essentially of rhodium.
- 19. The method of claim 15 wherein the precursor comprises iridium, and wherein the released metal consists essentially of iridium.
- 20. The method of claim 15 wherein the precursor comprises cobalt, and wherein the released metal consists essentially of cobalt.
- 21. The method of claim 15 wherein the precursor comprises palladium, and wherein the released metal consists essentially of palladium.

- 22. The method of claim 15 wherein the precursor comprises platinum, and wherein the released metal consists essentially of platinum.
- 23. The method of claim 15 wherein the precursor comprises nickel, and wherein the released metal consists essentially of nickel.
- 24. A method of forming a capacitor, comprising:

  providing a semiconductor substrate having an electrical node supported thereby;

forming an electrical interconnect in electrical contact with the node, the electrical interconnect comprising conductively-doped silicon;

forming a conductive material over the electrical interconnect, the conductive material comprising one or more of TiN, WN, TaN, elemental Ta, elemental Ti and elemental W;

providing a metallo-organic precursor proximate the conductive material; exposing the precursor to a reducing atmosphere to release metal from the precursor;

depositing the released metal over the conductive material to form a first capacitor electrode;

forming a dielectric material over the first capacitor electrode; and forming a second capacitor electrode over the dielectric material.



- 25. The method of claim 24 wherein the precursor comprises ruthenium, and wherein the released metal consists essentially of ruthenium.
- 26. The method of claim 24 wherein the precursor comprises rhodium, and wherein the released metal consists essentially of rhodium.
- 27. The method of claim 24 wherein the precursor comprises iridium, and wherein the released metal consists essentially of iridium.
- 28. The method of claim 24 wherein the precursor comprises cobalt, and wherein the released metal consists essentially of cobalt.
- 29. The method of claim 24 wherein the precursor comprises palladium, and wherein the released metal consists essentially of palladium.
- 30. The method of claim 24 wherein the precursor comprises platinum, and wherein the released metal consists essentially of platinum.
- 31. The method of claim 24 wherein the precursor comprises nickel, and wherein the released metal consists essentially of nickel.

- 32. The method of claim 24 wherein the precursor comprises tricarbonyl-cyclohexadiene ruthenium.
- 33. The method of claim 24 wherein the reducing atmosphere comprises NH<sub>3</sub>.
- 34. The method of claim 24 wherein the reducing atmosphere comprises activated hydrogen.
- 35. The method of claim 24 wherein the reducing atmosphere comprises H<sub>2</sub>.
- 36. The method of claim 24 wherein the conductive material consists of one or more of TiN, elemental Ti, WN, elemental W, TaN and elemental Ta.
- 37. The method of claim 24 wherein the second capacitor electrode comprises conductively-doped silicon.
- 38. The method of claim 24 wherein the second capacitor electrode comprises metal; and wherein the forming the second capacitor electrode comprises exposing a metal-comprising precursor to a reducing atmosphere.



- The method of claim 24 wherein the second capacitor electrode 39. comprises metal; and wherein the forming the second capacitor electrode comprises exposing a metal-comprising precursor to an oxidizing atmosphere.
- The method of claim 24 wherein the second capacitor electrode 40. comprises metal; wherein the dielectric material comprises an oxide; and wherein the forming the second capacitor electrode comprises exposing a metalcomprising precursor to an oxidizing atmosphere.
- 41. The method of claim\24 wherein the second capacitor electrode comprises metal; wherein the dielectric material comprises an Ta<sub>2</sub>O<sub>5</sub>; and wherein the forming the second capacitor electrode comprises exposing a metalcomprising precursor to an oxidizing atmosphere comprising one or more of  $N_2O$ ,  $O_2$  and  $O_3$ .

